

State of New Hampshire
Division of Plant and Property Management
Bureau of Purchase and Property
25 Capitol Street, State House Annex
Concord, New Hampshire 03301-6398

Date: 5/14/2004

Bid No.: 411

Date of Bid Opening: 6/8/2004

Time of Bid Opening: 1:30

PLEASE DIRECT ANY QUESTIONS REGARDING THIS BID TO: MICHAEL P. WALSH II, PURCHASING AGENT/
TEL. NO: (603) 271-3235 - FAX No. (603) 271-2700

BID INVITATION FOR: BRIDGE AND BRIDGE APPROACH RAILING, SUPPLY ONLY

Unless specifically amended or deleted by the Division of Plant and Property Management, the following General Terms and Conditions apply to this Bid and any resulting Purchase Order or Contract.

GENERAL CONDITIONS AND INSTRUCTIONS:

NATURE OF, AND ELIGIBILITY TO RESPOND. This bid invitation is submitted in accordance with Chapter 21-1, and rules promulgated thereunder, and constitutes a firm and binding offer. A bid may not be withdrawn unless permission is obtained from the Bureau of Purchase and Property.

Bids may be issued only by the Bureau of Purchase and Property and are not transferable.

SAMPLES AND DEMONSTRATIONS. When samples are required they must be submitted free of costs and will not be returned.

Items left for demonstration or evaluation purposes shall be delivered and installed free of charge and shall be removed at no cost to the State. Demonstration units shall not be offered to the State as new equipment.

Bids. Bids must be received at the Bureau of Purchase and Property before the date and time specified for the opening. Bids must be submitted on this bid form or exact copies and must be typed or clearly printed in ink. Corrections must be initialed. Bids are to be made less Federal Excise Tax and no charge for handling unless required by law.

Bids will be made available to the public after the time of award. Bid results will be given by mail only if requested in writing and accompanied by a self-addressed, stamped business size envelope.

SPECIFICATIONS. Vendors must submit on items as specified. Proposed changes must be submitted in writing and received at the Bureau of Purchase and Property at least five (5) working days prior to the bid opening. Vendors shall be notified in writing if any changes to the specifications are made.

AWARD. The award will be made to the responsible Vendor submitting a conforming RFB meeting specifications at the lowest cost unless other criteria are noted in the RFB. Unless otherwise noted, the award may be made by individual items.

If there is a discrepancy between the unit price and the extension, the unit price will prevail.

When identical low bids are received the award will be made in accordance with the Administrative Rules.

Discounts will not be considered in making award but may be offered on the Invoice for earlier payment and will be applicable on the date of completion of delivery or receipt of Invoice, whichever is later. On orders specifying split deliveries, discounts will apply on the basis of each delivery or receipt of Invoice, whichever is later.

PATENT INFRINGEMENT. Any responding vendor who has reason to believe that any other responding vendor will violate a patent should such responding vendor be awarded the contract shall set forth in writing, prior to the date and time of opening, the grounds for his belief and a detailed description of the patent.

ASSIGNMENT PROVISION. The responding vendor hereby agrees to assign all causes of action that it may acquire under the antitrust laws of New Hampshire and the United States as the result of conspiracies, combinations, or contracts in restraint of trade which materially affect the price of goods or services obtained by the state under this contract if so requested by the State of New Hampshire.

FEDERAL FUNDS. This Division of Plant and Property Management, under RSA 21-1:14, VIII shall assure the continuation or granting of federal funds or other assistance not otherwise provided for by law by following the Federal Procurement Standards.

STATE'S OPTIONS: The Bureau of Purchase and Property reserves the right to reject or accept all or any part of any bid, to determine what constitutes a conforming bid, to award the bid solely as it deems to be in the best interest of the State, and to waive irregularities that it considers not material to the bid.

PUBLIC INFORMATION: The responding vendor hereby acknowledges that all information relating to this bid and any resulting order (Including but not limited to fees, contracts, agreements and prices) are subject to these laws of the State of New Hampshire regarding public information.

PERSONAL LIABILITY: The responding vendor agrees that in the preparation of this bid or the execution of any resulting contract or order, representatives of the State of New Hampshire shall incur no liability of any kind.

PROOF OF COMPLIANCE. The responding vendor may be required to supply proof of compliance with proposal specifications. When requested, the responding vendor must immediately supply the Bureau of Purchase and Property with certified test results or certificates of compliance. Where none are available, the State may require independent laboratory testing. All costs for such testing, certified test results or certificate of compliance shall be the responsibility of the responding vendor.

FORM OF CONTRACT. The terms and conditions set forth in any additional Terms and Conditions by the Bureau of Purchase and Property are part of the bid and will apply to any contract awarded the responding vendor unless specific exceptions are taken and accepted and will prevail over any contrary provisions in Terms and Conditions submitted by the responding vendor.

OFFER. The undersigned hereby offers to sell to the State of New Hampshire the commodities or services indicated in the following page(s) of this Bid at the price(s) quoted in complete accordance with all conditions of this Bid.

Company

Name: _____

Address: _____

Tel.:(local) _____ **(Toll free)** _____

Fax#: _____ **(EMAIL)** _____

Authorized

Signature: _____

(TYPE OR PRINT NAME)

This document must be signed by a person who is authorized to legally obligate the responding vendor. A signature on this document indicates that all State of New Hampshire terms and conditions are accepted by the responding vendor and that any and all other terms and conditions submitted by the responding vendor are null and void, even if such terms and conditions have terminology to the contrary. The responding vendor shall also be subject to State of New Hampshire terms and conditions as stated on the reverse of the purchase order.

CONTRACT TERMS AND CONDITIONS

1. The State of New Hampshire, acting through the Division of Plant and Property Management, engages the firm or individual ("the Vendor") to perform the services and/or sale of goods, described in the attached State documents, if any, and the Vendor's bid or quotation, both of which are incorporated herein by reference.

2. COMPLIANCE BY VENDOR WITH LAWS AND REGULATIONS. In connection with the performance of this agreement, the Vendor shall comply with all statutes, laws, regulations, and orders of federal, state, county or municipal authorities which shall impose any obligation or duty upon the Vendor, including, but not limited to civil rights and equal opportunity laws.

3. TERM. The contract, and all obligations of the parties thereunder, shall become effective on a specified date and shall be completed in their entirety prior to a specified date. Any work undertaken by the Vendor prior to the effective date shall be at his sole risk and, in the event that the contract shall not become effective, the State shall be under no obligation to reimburse the Vendor for any such work.

4. CONTRACT PRICE. The contract price, a payment schedule and a maximum limitation of price shall be as specified by the bid invitation and the Vendor's bid. All payments shall be conditioned upon receipt, and approval by the State, of appropriate vouchers and upon satisfactory performance by the Vendor, as determined by the State. The payment by the State of the Contract Price shall constitute complete reimbursement to the Vendor for all expenses of any nature incurred by the Vendor in the performance by the Vendor and complete payment for the Services. The State shall have no other liability to the Vendor.

5. DELIVERY. If the vendor fails to furnish items and/or services in accordance with all requirements, including delivery, the state may re-purchase similar items from any other source without competitive bidding, and the original vendor may be liable to the state for any excess costs.

If a vendor is unable to complete delivery by the date specified, he must contact the using agency. However, the agency is not required to accept a delay to the original delivery date. All deliveries are subject to inspection and receiving procedure rules as established by the State of New Hampshire. Deliveries are not considered accepted until compliance with these rules has been established. State personnel signatures on shipping documents shall signify only the receipt of shipments. All deliveries shall be FOB Destination.

6. INVOICING. All invoices must be in triplicate showing Order Number, Unit and Extension Prices and discounts allowed. A separate invoice shall be submitted for each order. Unless otherwise noted on the invitation to bid or purchase order, payment will not be due until thirty (30) days after all services have been completed, or all items have been delivered, inspected and accepted or the invoice has been received at the agency business office, whichever is later.

7. PERSONNEL.

7.1. The Vendor shall disclose in writing the names of all owners (5% or more), directors, officers, employees, agents or subcontractors who are also officials or employees of the State of New Hampshire. Any change in this information shall be reported in writing within fifteen (15) days of their occurrence.

7.2. The person signing this agreement on behalf of the State, or his or her delegatee ("Contracting Officer") shall be the State's representative for purposes of this agreement. In the event of any dispute concerning the interpretation of this agreement, the Contracting Officer's decision shall be final.

8. EVENT OF DEFAULT; REMEDIES.

8.1. Any one or more of the following acts or omissions of the Vendor shall constitute an event of default hereunder ("Events of Default"):

- 8.1.1.** failure to deliver the goods or services satisfactorily or on schedule; or
- 8.1.2.** failure to submit any report required hereunder; or

8.1.3. failure to perform any of the other covenants and conditions of this agreement.

8.2. Upon the occurrence of any Event of Default, the State may take any one, or more, or all, of the following actions:

8.2.1. give the Vendor a written notice specifying the Event of Default and requiring it to be remedied within, in the absence of a greater or lesser specification of time, thirty (30) days from the date of the notice; and if the Event of Default is not timely remedied, terminate this agreement, effective two (2) days after giving the Vendor notice of termination; and

8.2.2. give the Vendor a written notice specifying the Event of Default and suspending all payments to be made under this agreement and ordering that the portion of the Contract Price, which would otherwise accrue to the Vendor during the period from the date of such notice until such time as the State determines that the Vendor has cured the Event of Default, shall never be paid to the Vendor; and

8.2.3. set off against any other obligation the State may owe to the Vendor any damages the State suffers by reason of any Event of Default; and

8.2.4. treat the agreement as breached and pursue any of its remedies at law or in equity, or both.

9. WAIVER OF BREACH. No failure by the State to enforce any provisions hereof after any Event of Default shall be deemed a waiver of its rights with regard to that Event, or any subsequent Event. No express failure of any Event of Default shall be deemed a waiver of any provision hereof. No such failure or waiver shall be deemed a waiver of the right of the State to enforce each and all of the provisions hereof upon any further or other default on the part of the Vendor.

10. VENDOR'S RELATION TO THE STATE. In the performance of this agreement the Vendor is in all respects an independent contractor, and is neither an agent nor an employee of the State. Neither the Vendor nor any of its officers, employees, agents or members shall have authority to bind the State nor are they entitled to any of the benefits, workmen's compensation or emoluments provided by the State to its employees.

11. ASSIGNMENT AND SUBCONTRACTS. The Vendor shall not assign, or otherwise transfer any interest in this agreement without the prior written consent of the State. No work required by this contract shall be subcontracted without the prior written consent of the State.

12. INDEMNIFICATION. The contractor shall defend, indemnify and hold harmless the State, its officers and employees, from and against any and all losses suffered by the State, its officers and employees, and any and all claims, liabilities or penalties asserted against the State, its officers and employees, by or on behalf of any person, on account of, based on, resulting from, arising out of (or which may be claimed to arise out of) the acts or omissions of the Vendor. Notwithstanding the foregoing, nothing herein contained shall be deemed to constitute a waiver of the sovereign immunity of the State, which immunity is hereby reserved to the State. This covenant shall survive the termination of this agreement.

12.1 PATENT PROTECTION. The seller agrees to indemnify and defend the State of New Hampshire from all claims and losses resulting from alleged and actual patent infringements and further agrees to hold the State of New Hampshire harmless from any liability arising under RSA 382-A:2-312(3). (Uniform Commercial Code).

13. TOXIC SUBSTANCES. In compliance with RSA 277-A known as the Workers Right to Know Act, the vendor shall provide Material Safety Data Sheets with the delivery of any and all products covered by said law.

14. NOTICE. Any notice by a party hereto to the other party shall be deemed to have been duly delivered or given at the time of mailing by certified mail, postage prepaid, in a United States Post Office addressed to the parties at the addresses given below.

15. AMENDMENT. This agreement may be amended, waived or discharged only by an instrument in writing signed by the parties hereto.

16. CONSTRUCTION OF AGREEMENT AND TERMS. This agreement shall be construed in accordance with the laws of the State of New Hampshire, and is binding upon and inures to the benefit of the parties and their respective successors and assigns.

17. ADDITIONAL PROVISIONS. The additional provisions (if any) have been set forth as Exhibit "A" hereto.

18. ENTIRE AGREEMENT. This agreement, which may be executed in a number of counterparts, each of which shall be deemed an original, constitutes the entire agreement and understanding between the parties, and supersedes all prior agreements and understandings relating hereto.

BID INVITATION FOR: BRIDGE APPROACH RAILING & COMPONENTS, SUPPLY ONLY

PURPOSE:

The purpose of this bid invitation is to establish a contract in the form of a purchase order for supplying the State of New Hampshire, Department of Transportation, Bureau of Bridge Maintenance with a *BRIDGE COMPONENTS AND BRIDGE APPROACH RAILING*, in accordance with the requirements of this bid invitation and any resulting order. These items shall be a one-time order with delivery required to the location indicated in the F.O.B. section of this bid invitation.

VENDOR CERTIFICATIONS

All bidders must be duly registered as a vendor authorized to conduct business in the State of New Hampshire.

STATE OF NEW HAMPSHIRE VENDOR APPLICATION

Bidders must have a completed Vendor Application and W-9 Form on file with the NH Bureau of Purchase and Property. See the following website for information on obtaining and filing the required forms (no fee):

<http://www.admin.state.nh.us/purchasing>

NEW HAMPSHIRE SECRETARY OF STATE REGISTRATION

A person or persons conducting business under any name other than his/her own legal name must register with the NH Secretary of State. Businesses are classified as 'Domestic' (in-state) or 'foreign' (out-of-state). Please visit the following website for information on requirements and filing fees for both classifications:

<http://www.admin.state.nh.us/sos/corporate>

SPECIFICATION COMPLIANCE:

Bidder's offer must meet the required specifications as written. There are 2 specification amendment pages attached to this bid, the requirements and specifications listed on these pages are to become part of the product specification and supersede any previous conflicting specification.

SPECIFICATION-MATERIAL:

Aluminum extrusions (post, bases, rails, splice bars, pins and clamp bars) shall be ASTM B221, ALLOY 6061-T6 or ALLOY 6351-T5 (MIN. 10% ELONGATION).

Stainless steel anchor studs, hex head bolts and hex nuts (TYPE 302) shall be ASTM A276, (TYPE 304 MOD) OR (TYPE 430 MOD), (100,000 PSI AND 15% ELONGATION)

Steel embedded jam and hex nuts shall be ASTM A563 GRADE A or better.

Aluminum washers shall be ASTM B209, ALLOY 2024-T3 ALCLAD.

Preformed bearing pad shall meet requirements of AASHTO M251.

SPECIFICATION- PROCESS:

All equipment and materials offered by the bidder must be new; shall not be used, rebuilt or refurbished.

Submittal of Shop drawings is required and requesting agency before manufacturing must approve drawings. **Shop drawings will be submitted within 10 days after receipt of purchase order.** Mailing address for submittal of shop drawings as follows:

CHUCK CORLISS
NH DOT BRIDGE MAINTENANCE
PO BOX 483
CONCORD NH, 03302-0483
TEL. #603-271 3667

BID PRICES:

Bid prices shall include delivery and all other costs. Bid prices should be government and/or educationally discounted prices.

WARRANTY REQUIREMENTS:

Successful bidder shall be required to provide a USA warranty on all of the equipment awarded for a period of not less than the manufacturer's standard period of time. The warranty shall cover 100% of all parts, freight, travel, lodging and expenses.

ALL ITEMS OFFERED MUST BE TO ENCLOSED DRAWINGS AND SPECIFICATIONS**F.O.B.:**

The F.O.B. shall be destination to the following **delivery** point:

STATE OF NEW HAMPSHIRE
BRIDGE MAINTENANCE
FRANKLIN YARD
RANGE ROAD (JCT 11 & 3A)
FRANKLIN, NH 03235

REQUISITION NO.: 199626

OFFER:

Successful bidder hereby offers to sell the required items to the State of New Hampshire at the following price(s):

The unit prices and extensions indicated should be government and/or educationally discounted prices.

| <u>QTY</u> | <u>UNIT</u> | <u>DESCRIPTION</u> | <u>US DOLLARS DELIVERED PRICE</u> |
|------------|-------------|---|---------------------------------------|
| 1 | EA. | NEW BLACK ANODIZED BRIDGE AND BRIDGE RAIL APPROACH RAILING (3 RAIL TYPE). COMPLETE UNIT TO INCLUDE POSTS, CORNERS, APPURTENANCES, RAIL HARDWARE & ACCESSORIES HARDWARE, COMPLETE AND READY FOR INSTALLATION. (PER ENCLOSED DRAWINGS AND SPECIFICATIONS) | \$_____ |

DELIVERY TIME:

Successful bidder hereby agrees to accomplish delivery of any item awarded within **60 calendar days** of approval of shop drawings.

BID AWARD:

Award will be made in total to the bidder offering the lowest total price that meets all required specifications

BIDDER OFFER FORMAT:

THIS BID #411 MAY HAVE BEEN DELIVERED TO YOU IN A FACSIMILE OR WEB BASED FORMAT. **BIDDERS MUST** RETURN THEIR **COMPLETE** SIGNED FAX OR HARD COPY OFFERS TO THE BUREAU OF PURCHASE AND PROPERTY **BEFORE 1:30 PM ON 6/8/2004.**

FAX NUMBER 603-271-2700

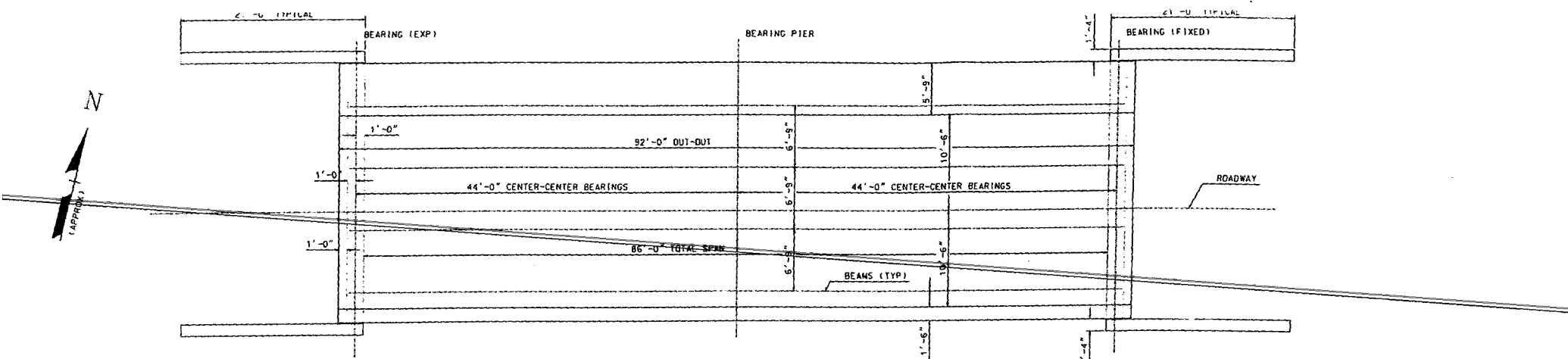
Mailing address will be: NH DEPT OF ADMINISTRATIVE SVC
BUREAU OF PURCHASE AND PROPERTY
25 CAPITOL STREET, STATE HOUSE ANNEX, ROOM 102
CONCORD, NH 03301

Bid #411, opening @ 1:30 pm on 6/8/2004

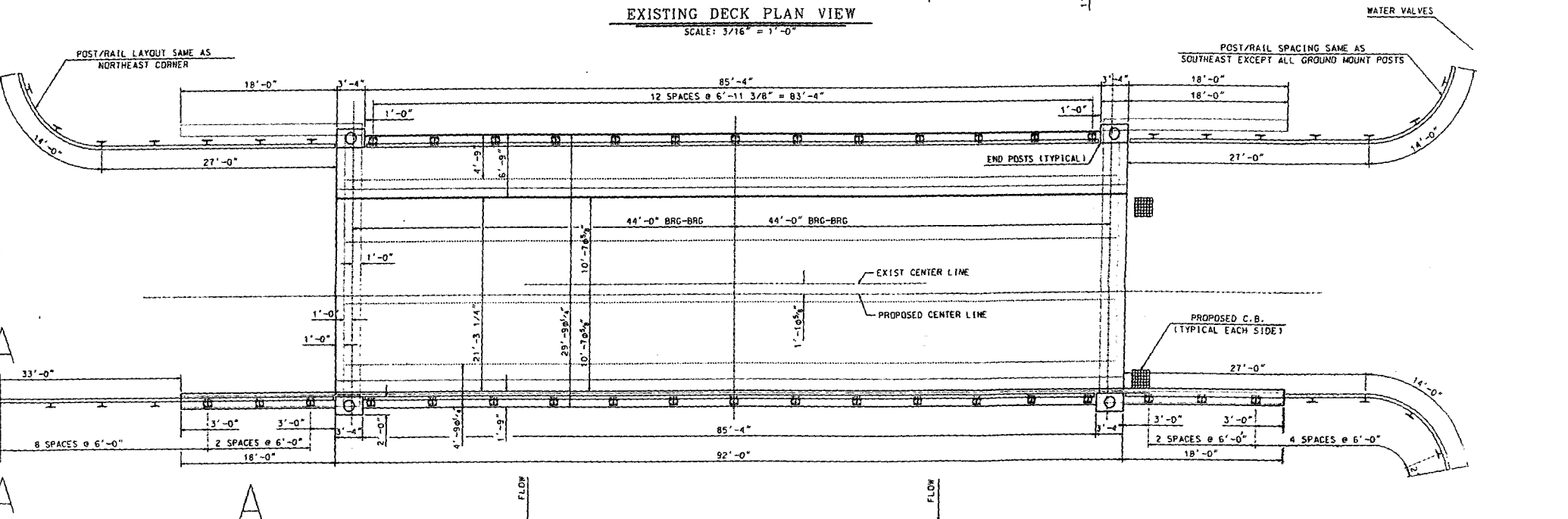
BID RESULTS:

Bid results will not be given over the telephone. Bid results will be mailed to you if you include a self-addressed envelope with the correct amount of postage on it. Bid results may also be viewed on our web site at:

<http://www.state.nh.us/purchasing/bids.asp>

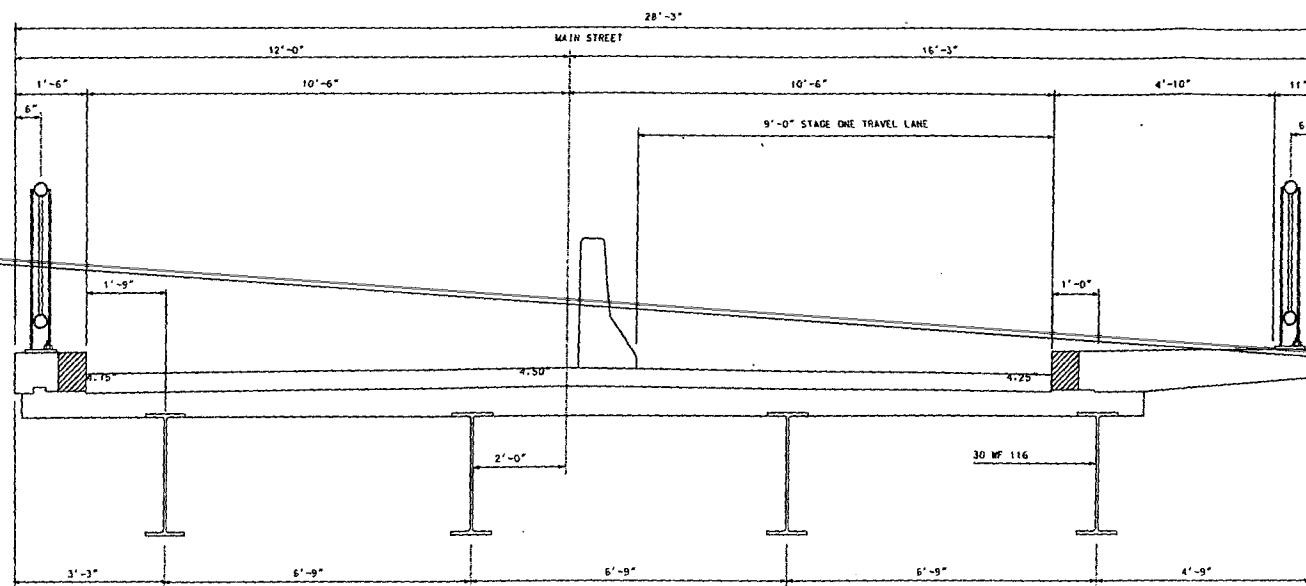


EXISTING DECK PLAN VIEW
SCALE: 3/16" = 1'-0"



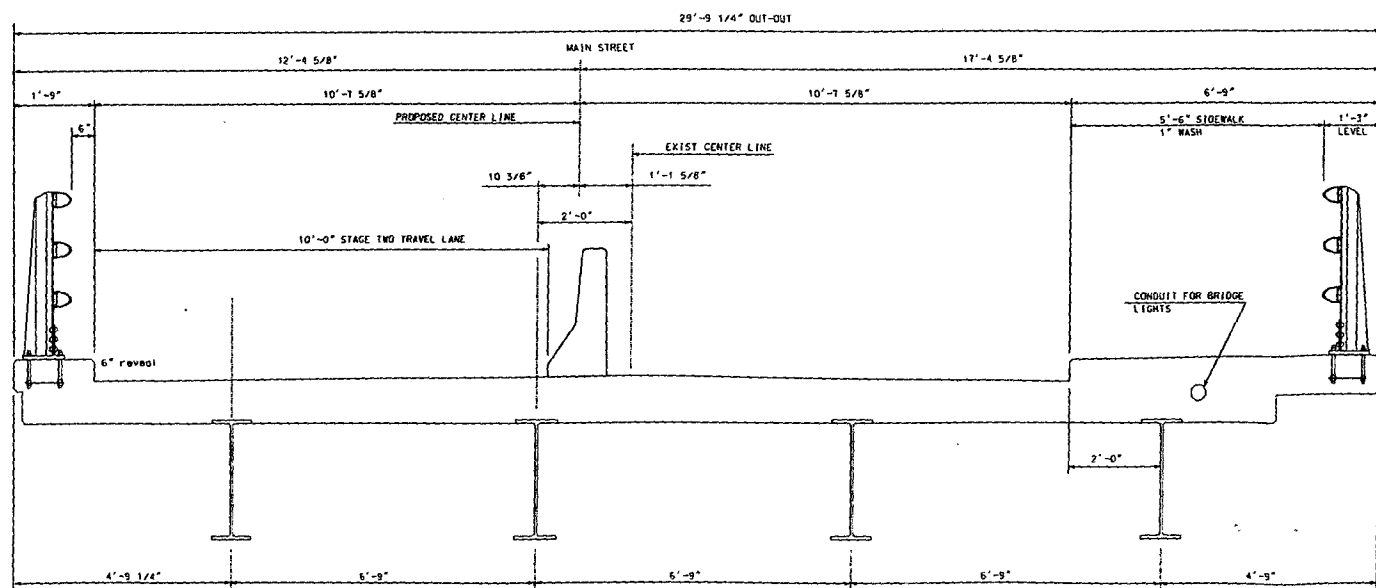
PROPOSED DECK PLAN VIEW
SCALE: 3/16" = 1'-0"

| | | | | | | | | | | | |
|---|--|-----------------------|--|----------------------------|--|--|--|--|--|--|--|
| STATE OF NEW HAMPSHIRE | | | | | | | | | | | |
| DEPARTMENT OF TRANSPORTATION • BUREAU OF BRIDGE MAINTENANCE | | | | | | | | | | | |
| TOWN: ENFIELD | | BRIDGE NO: 070153 | | STATE PROJECT: 141669/1190 | | | | | | | |
| LOCATION: MAIN STREET OVER MASCOMA RIVER | | | | | | | | | | | |
| GENERAL PLAN | | | | | | | | | | | |
| DESIGNED BY: CMC | | CHECKED BY: DAD | | DATE: 3-4-1-16 | | | | | | | |
| DRAWN BY: CMC | | CHECKED BY: DAD | | DATE: 3-4-1-16 | | | | | | | |
| ISSUED BY: CMC | | CHECKED BY: DAD | | DATE: 3-4-1-16 | | | | | | | |
| REV. DATE: 2001 | | REV. DATE: 2001 | | REV. DATE: 2001 | | | | | | | |
| SUBDIRECTORY: ENFIELD 070153 | | JOHN LOCATOR: GENPLAN | | SHEET NO: 1 OF 7 | | | | | | | |



EXIST DECK CROSS SECTION

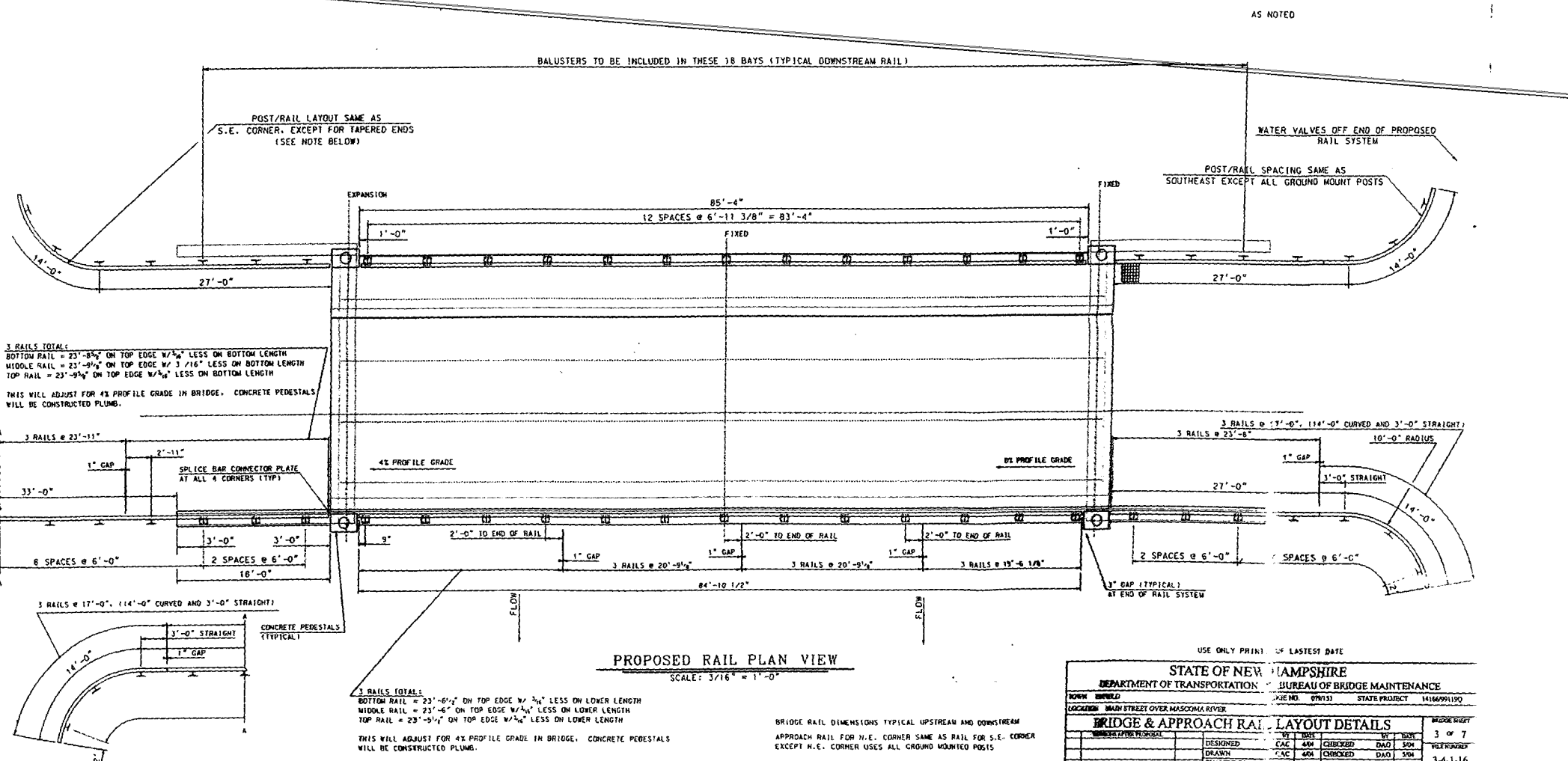
SCALE: 1/2" = 1'-0"



PROPOSED DECK CROSS SECTION

SCALE: 3/4" = 1'-0"

| | | | | | | | | | |
|---|--------------------------------|-----|------------|--------|-----|---------------|-------------|------|---------------|
| STATE OF NEW HAMPSHIRE | | | | | | | | | |
| DEPARTMENT OF TRANSPORTATION • BUREAU OF BRIDGE MAINTENANCE | | | | | | | | | |
| TOWN | DUNSTABLE | | BRIDGE NO. | 079153 | | STATE PROJECT | 1416699119Q | | |
| LOCATION | MAIN STREET OVER MASCOMA RIVER | | | | | | | | |
| EXISTING AND PROPOSED CROSS SECTION | | | | | | | | | |
| DESIGNED | CAC | 404 | CHECKED | DAI | 504 | BY | 504 | DATE | 3-4-16 |
| DRAWN | CAC | 404 | CHECKED | DAI | 504 | QUANTITIES | XXX | XXX | XXX |
| ISSUE DATE | | | FOCAL YEAR | 2001 | | CREW | XX | | TOTAL BRIDGES |
| REV DATE | | | | | | | | | XX |



PROPOSED RAIL PLAN VIEW

SCALE: 3/16" = 1'-0"

BRIDGE RAIL DIMENSIONS TYPICAL UPSTREAM AND DOWNSTREAM
APPROACH RAIL FOR N.E. CORNER SAME AS RAIL FOR S.E. CORNER
EXCEPT N.E. CORNER USES ALL GROUND MOUNTED POSTS

USE ONLY PRINTED OF LATEST DATE

| STATE OF NEW HAMPSHIRE | | BUREAU OF BRIDGE MAINTENANCE | |
|--|--|------------------------------|--|
| DEPARTMENT OF TRANSPORTATION | | PROJECT NO. 079151 | |
| LOCATION: MAIN STREET OVER MASCOMA RIVER | | STATE PROJECT 14164991190 | |
| BRIDGE & APPROACH RAIL LAYOUT DETAILS | | BRIDGE SHEET | |
| DESIGNED BY: CAC | | 3 OF 7 | |
| DRAWN BY: CAC | | VLT/HUNTER | |
| QUANTITIES BY: CAC | | 3-4-1-16 | |
| ISSUE DATE: 2001 | | TOTAL SHEET | |
| KEY DATE: 2001 | | X | |

SECTION VIEW

BACK ELEVATION VIEW

BACK VIEW

END VIEW

RAIL CLAMP BAR
FULL SIZE

POST BASE DETAILS

SCALE: 3" = 1'-0"

RAIL NOTES:

1. POSTS SHALL BE NORMAL TO FINISHED GRADE.
2. THREADS FOR ANCHOR BOLTS MAY BE ROLLED OR CUT. IF CUT THREADS ARE USED, BOLT DIAMETER SHALL NOT BE LESS THAN NOMINAL DIAMETER. IF ROLLED THREADS ARE USED, BOLT DIAMETER SHALL NOT BE LESS THAN ROOT DIAMETER OF THREADS.
3. JOINTS IN RAIL LENGTH SHALL BE SPLICED AS DETAILED.
4. ENDS OF TUBE SECTIONS SHALL BE SAWN OR MILLED.
5. CUT ENDS SHALL BE TRUE AND SMOOTH.
6. EACH RAIL SECTION SHALL BE ATTACHED TO A MINIMUM OF FOUR (4) POSTS.
7. RAIL SHALL END SMOOTH.
8. BRIDGE RAIL AND COMPONENTS SHALL BE ANCHORED BLACK. SEE SPECIAL PROVISION 563 & 565

MATERIAL:

1. ALUMINUM EXTRUSIONS (POSTS, BASES, RAILS, SPLICE BARS, PINS AND CLAMP BARS) SHALL BE ASTM B221, ALLOY 6061-T6 TO MEET ALL SPECIFICATIONS (15 MIN. LOS elongation).
2. STAINLESS STEEL ANCHOR STUDS, HEX HEAD BOLTS AND HEX NUTS (TYPE 304) SHALL BE ASTM A193, TYPE 304, TO MEET ALL SPECIFICATIONS (15 MIN. LOS elongation).
3. STEEL EMBEDDED JAIL AND HEX NUTS SHALL BE ASTM A563 GRADE 4 OR BETTER.
4. ALUMINUM WASHERS SHALL BE ASTM B209, ALLOY 2024-T3 ALCLAD.
5. PERFORMED ELASTOMERIC BEARING PAD SHALL MEET REQUIREMENTS OF AASHTO M251.
6. RETROREFLECTIVE DELINEATORS, DRILL DRILLING OF POSTS, STAINLESS STEEL TYPE 304 ANCHOR STUDS, RAILS, SPLICE BARS, PINS AND CLAMP BARS AND PINS AND PLATES FOR ROAD AND BRIDGE CONSTRUCTION (COL-1) FOR ADDITIONAL DETAILS AND SPACING.

RAIL SECTION

RAIL END CAP

~~POST ANCHOR ASSEMBLY~~

ANCHOR PLATE

RAIL ELEVATION

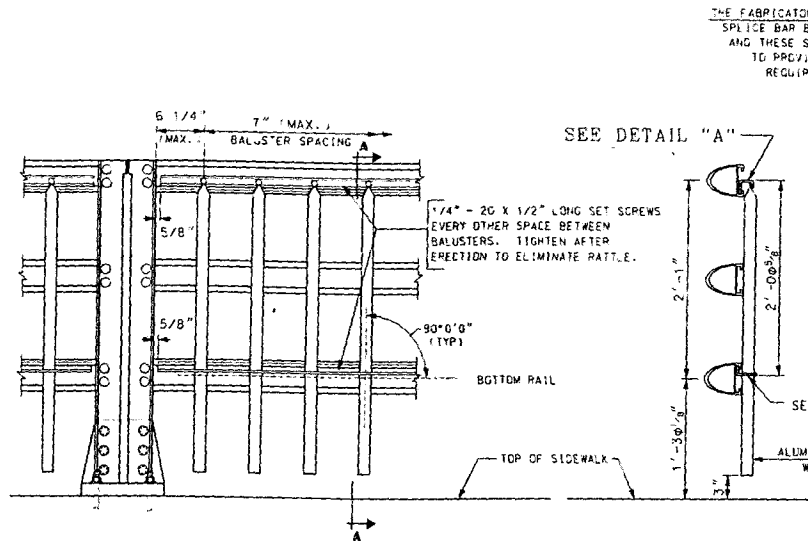
SPLICE BAR DETAILS:

1. SEE SHEET 7 OF 7 FOR DETAILS AND NOTES.

BALUSTER DETAILS:

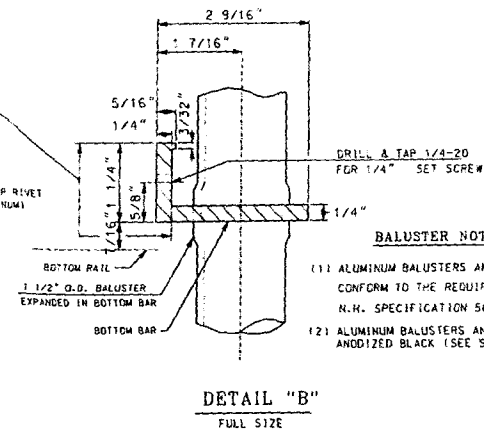
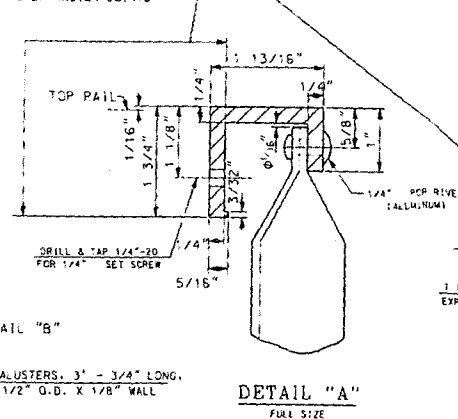
1. SEE SHEET 5 OF 7 FOR DETAILS AND NOTES.

| | | | | | | | | | |
|--|--|--------------------------------|--|-------------|--|---------|--|-------------|--|
| STATE OF NEW HAMPSHIRE | | | | | | | | | |
| DEPARTMENT OF TRANSPORTATION • BUREAU OF BRIDGE MAIN | | | | | | | | | |
| TOWN | | COUNTY | | BRIDGE NO. | | SPAN(S) | | STATE | |
| LOCATION | | MAIN STREET OVER MAGADON RIVER | | | | | | | |
| BRIDGE RAIL DETAILS (3-BAR ALUMINUM) | | | | | | | | | |
| REVISIONS OF THE PROJECT | | | | DESIGNED | | THROTT | | DATE | |
| | | | | DRAWN | | CAC | | 4/24 | |
| | | | | QUANTITIES | | | | CHECKED | |
| | | | | SUBMIT DATE | | | | CHECKED | |
| | | | | REV DATE | | | | RECALC DATE | |
| | | | | | | | | 2001 | |



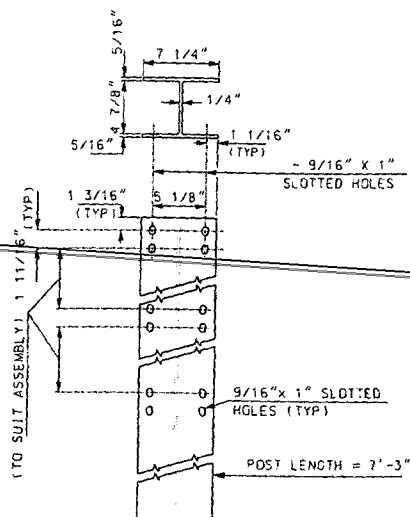
BACK ELEVATION OF POST
SCALE: 1 1/2" = 1'-0"

SECTION A-A
SCALE: 1 1/2" = 1'-0"

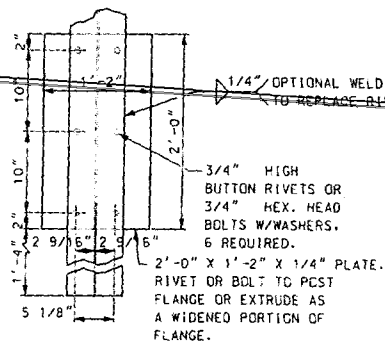


BALUSTER NOTES

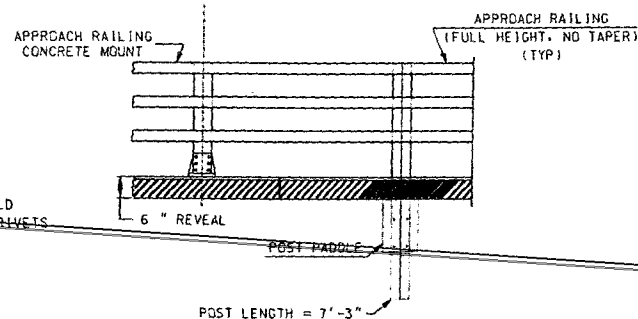
- (1) ALUMINUM BALUSTERS AND ATTACHMENTS SHALL
CONFORM TO THE REQUIREMENTS SPECIFIED IN
N.H. SPECIFICATION 563.2.6.
- (2) ALUMINUM BALUSTERS AND ATTACHMENTS SHALL BE
ANODIZED BLACK (SEE SPECIAL PROVISIONS, 563 & 565)



APPROACH RAIL POST - FRONT ELEVATION
SCALE: 2" = 1'-0"



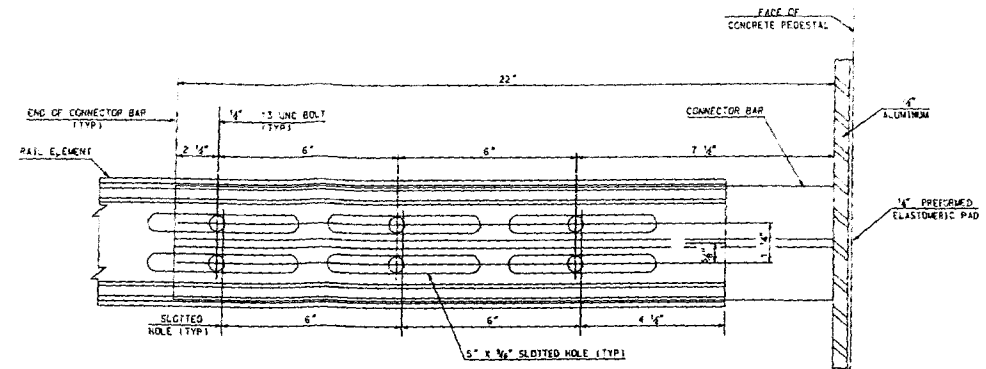
LOWER DETAIL OF APPROACH POST
SCALE: 1 1/2" = 1'-0"



APPROACH RAIL ELEVATION
SCALE: 1 1/2" = 1'-0"

| | | | |
|--|---------------------------------|------------|---------|
| STATE OF NEW HAMPSHIRE | | | |
| DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE MAIN | | | |
| TOWN | ENFIELD | BRIDGE NO. | 07W113 |
| LOCATION | MAIN STREET OVER MASCOOMA RIVER | | |
| STATE PP: 8 | | | |
| APPROACH POST AND BALUSTER DETAIL | | | |
| DESIGNED | CAC | AKA | CHECKED |
| DRAWN | CAC | AKA | CHECKED |
| QUANTITIES | XXX | XXX | CHECKED |
| ISSUE DATE | FISCAL YEAR | | |
| REV DATE | 2001 | | |

| | | |
|-----------------|------------------|-------------|
| SUBDIRECTORY | 2000 LOCATOR | SHEET SCALE |
| ENFIELD DTW 053 | APPROACH & BALUS | AS NOTED |



EXPANSION/FIXED CONNECTOR-BAR DETAILS

BACK ELEVATION VIEW - SCALE NONE

22" LONG EXPANSION/FIXED

2'-5 1/4" x 4" x 1/4" ALUMINUM CONNECTION PLATE BOLTED TO CONCRETE PEDESTAL (DRILL AND GROUT 1" FEMALE MECHANICAL CONNECTORS)

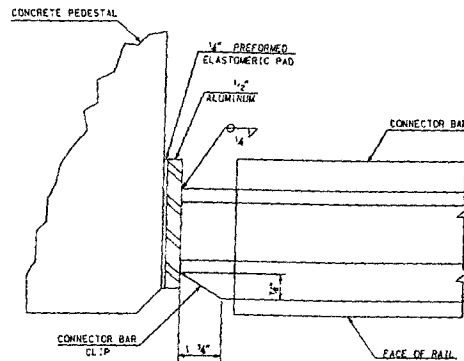
SLOPE DOWN WEST END OF BRIDGE 4%
SLOPE UP EAST END OF BRIDGE 0% (CONSTRUCT SQUARE)

FRONT VIEW

SIDE VIEW

CONNECTOR PLATE & CONNECTOR BARS

SCALE: NONE



RAIL-PEDESTAL CONNECTION

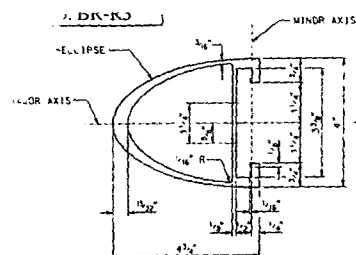
SCALE: NONE

CONNECTOR-BAR NOTES

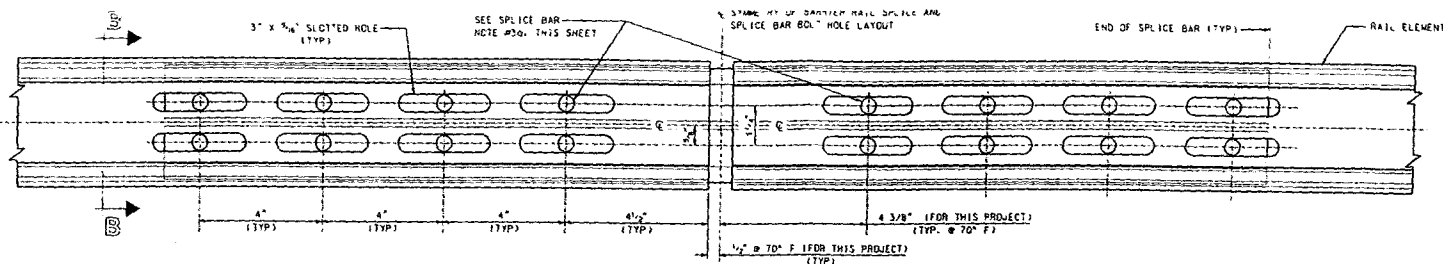
- (1) THE CONNECTOR-BARS SHALL BE USED TO CONNECT THE BRIDGE APPROACH RAIL TO THE CONCRETE PEDESTALS AT THE FIXED END OF THE DECK (2 LOCATIONS) AND AT THE EXPANSION END OF THE DECK (2 LOCATIONS)...
- (2) ALL CONNECTOR-BARS SHALL BE ATTACHED TO THE RAIL ELEMENT USING PARTIALLY THREADED BOLTS, WITH EITHER THE EXTRUDED WASHER OR THE WELDED WASHER, TIGHTENED SECURELY TO THE END OF THE THREADS, AND LEAVING A 1/8" GAP. FOR BOLT DETAILS SEE BRIDGE SHEET 7 OF 7.
- (3) FOR MATERIALS SPECIFICATION SEE BRIDGE SHEET 4 OF 7

| | | | |
|--|--------------------------------|------------|--------|
| STATE OF NEW HAMPSHIRE | | | |
| DEPARTMENT OF TRANSPORTATION • BUREAU OF BRIDGE MAIN | | | |
| TOWN | ENFIELD | BRIDGE NO. | 079113 |
| LOCATION | MAIN STREET OVER MASCOMA RIVER | | |
| BALUSTER CONNECTION DETAIL | | | |
| DESIGNED | CAC | 404 | CHECK |
| DRAWN | CAC | 404 | CHECK |
| QUANTITIES | XXX | XXX | CHECK |
| ISSUE DATE | FEBRUARY 1968 | | |
| REV DATE | 2001 | | |

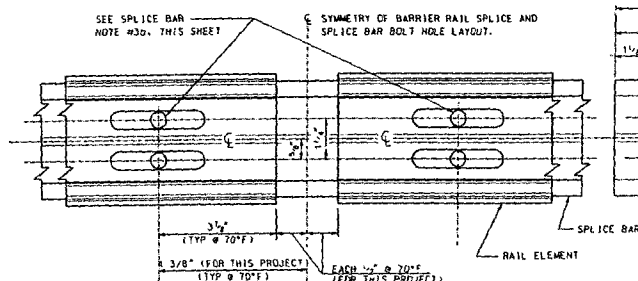
| SUBDIRECTORY | DON LOCATOR | SHEET SCALE |
|----------------|-------------|-------------|
| ENFIELD 079113 | BALUCOYN | AS NOTED |



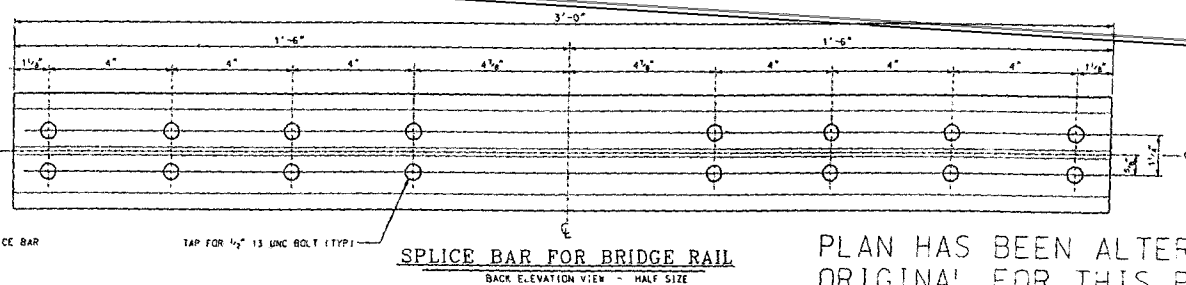
RAIL SECTION B-B
HALF SIZE



STANDARD SPLICE ASSEMBLY DETAILS
BACK ELEVATION VIEW - HALF SIZE

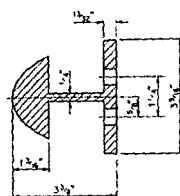


SPLICE ASSEMBLY DETAIL AT BRIDGE EXPANSION END
BACK ELEVATION VIEW - HALF SIZE

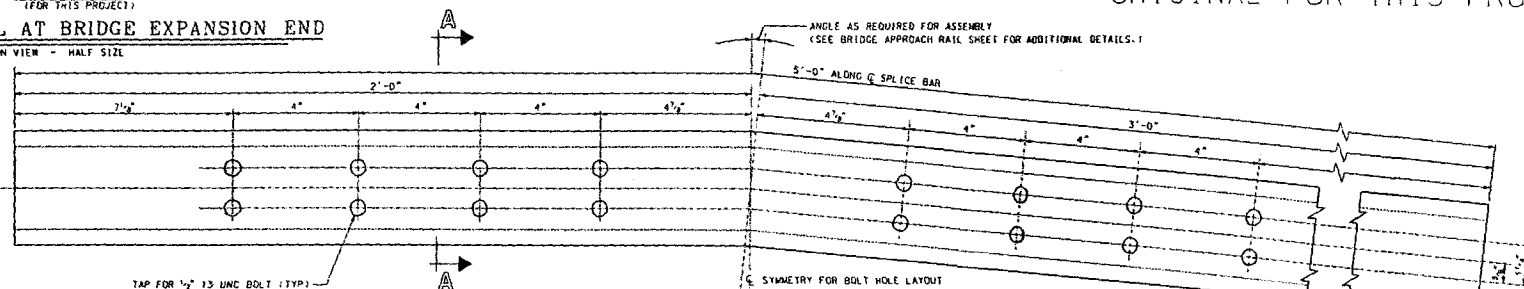


SPLICE BAR FOR BRIDGE RAIL
BACK ELEVATION VIEW - HALF SIZE

PLAN HAS BEEN ALTERED FROM
ORIGINAL FOR THIS PROJECT



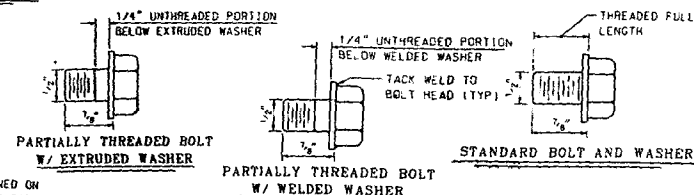
SECTION A-A
HALF SIZE



SPLICE BAR FOR BRIDGE APPROACH RAIL
BACK ELEVATION VIEW - HALF SIZE

SPLICE BAR NOTES

- (1) FOR MATERIALS SPECIFICATIONS AND ADDITIONAL DETAILS, SEE THE BRIDGE RAIL AND BRIDGE APPROACH RAIL SHEETS. (BRIDGE SHEETS XX OF XX.)
- (2) ALL BRIDGE RAILS AND BRIDGE APPROACH RAILS SHALL HAVE SLOTTED HOLES AT BOTH ENDS OF EACH RAIL ELEMENT.
- (3) THE SPLICE BAR SHALL BE ATTACHED TO THE RAIL ELEMENT AS FOLLOWS:
 - (a) THE STANDARD SPLICE FOR BOTH BRIDGE AND APPROACH RAILS SHALL BE FASTENED ON ONE SIDE USING STANDARD BOLTS & WASHERS TIGHTENED SECURELY. THE OTHER SIDE OF THE SPLICE SHALL USE THE PARTIALLY THREADED BOLT WITH EITHER THE EXTRUDED WASHER OR THE WELDED WASHER. TIGHTENED SECURELY TO THE END OF THE THREADS, AND LEAVING A 1/8" GAP. THIS ALLOWS EXPANSION ON ONE SIDE OF THE JOINT.
 - (b) THE RAIL SPLICE AT THE BRIDGE EXPANSION JOINT SHALL BE FASTENED ON BOTH SIDES OF THE RAIL SPLICE USING THE PARTIALLY THREADED BOLTS, WITH EITHER THE EXTRUDED WASHER OR THE WELDED WASHER. TIGHTENED SECURELY TO THE END OF THE THREADS, AND LEAVING A 1/8" GAP. THIS ALLOWS EXPANSION ON BOTH SIDES OF THE JOINT.



SPLICE BAR BOLT DETAILS
FULL SIZE

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION, CONCORD, N.H.
BRIDGE RAIL SPLICE BAR DETAILS (ALUMINUM)

STANDARD PLANS

STANDARD NO.
BR-R3

BRIDGE RAIL & SPLICE BAR - ASSEMBLY DETAIL
FULL SIZE

BRIDGE MAINTENANCE PROJECT #14166/991190
BRIDGE PLAN NO. 7 OF 7

SUBJECT: BRIDGE MAINTENANCE
DRAWING NO.: BR-R3 SPLICE BAR
SHEET SCALE: AS NOTED